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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,967	09/25/2006	Nicolas Nadaud	293259US0PCT	6539

22850 7590 12/09/2009  
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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COLEMAN, RYAN L

ART UNIT	PAPER NUMBER
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1792

NOTIFICATION DATE	DELIVERY MODE
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12/09/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,967	<b>Applicant(s)</b> NADAUD ET AL.	
	<b>Examiner</b> RYAN COLEMAN	<b>Art Unit</b> 1792	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-29 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.
2. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.
3. The Application is subject to the unity requirements set out in PCT Rules 13.1 – 13.4 and 37 CFR 1.475, as well as the PCT Administrative Instructions, Annex B. MPEP 1893.03(d) permits groupings of claims which are linked to form a single general inventive concept where there is a technical relationship among the inventions that involves at least one common or corresponding technical feature.
4. The PCT Administrative Instructions, Annex B, Part 1 at (b) state that “the special technical features” common to all groupings of inventions shall be defined, as in PCT Rule 13.2, to mean,  
  
“those technical features which each of the claimed inventions, considered as a whole, makes over the prior art.”
5. MPEP 1850 (Rev. 6, Sept. 2007, page 1800-98) further specifies that "PCT Rule 13.2, as it was modified effective July 1, 1992, no longer specifies the combinations of categories of invention which are considered to have unity of invention. The categories of invention in former PCT Rule 13.2 have been replaced with a statement describing the method for determining whether the requirement of unity of invention is satisfied.

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Unity of invention exists *only* when there is a technical relationship among the claimed inventions involving one or more special technical features."

6. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 1-10 and 20-23 drawn to a method for continuous vacuum cleaning of a substrate.

Group 2, claim(s) 11-19 and 24-29 drawn to substrates produced with a method of continuous vacuum cleaning.

7. The inventions listed as Groups 1 and 2 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical feature of the two groups is obvious in view of the prior art. The common technical feature between the two groups is the method of claim 1, and the method is obvious in view of U.S. Patent Application Publication No. 2003/0064198 by Thomsen et al. (hereafter referred to as "Thomsen"). Thomsen teaches a method of removing undesired material from a glass substrate while the substrate is in a vacuum environment (Par. 0012, 0054, 0062, and 0066). Thomsen teaches using a linear ion source and a mixture of oxygen (reads on *species having a low sputtering efficiency*) and argon to produce a plasma such that the plasma can be directed onto the glass substrate in order to clean the substrate (Par. 0012 and 0066). Although Thomsen does not specifically teach whether the mixture of oxygen and argon comprises predominantly oxygen or predominantly argon, Thomsen does teach that the two gases

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function differently in the cleaning plasma: argon functions to mill the glass surface and oxygen functions to clean the glass surface (Par. 0054). Since the argon and oxygen gases produce different effects in the plasma, their relative concentrations within the plasma are considered to be result-effective variables, and in accordance with MPEP 2144.05, *Optimization of Ranges*, it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the relative concentrations of argon and oxygen in the treatment plasma. Therefore, since the common technical feature of the two groups is obvious in view of the prior art, the two groups lack a common special technical feature.

8. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Product Species 1 (claims 11, 18, 19, and 24): substrate with a high reflection coating that includes a sequence of the following five types of layers: a first layer based on metal oxide or semiconductor, a layer of metal oxide or semiconductor deposited on the first layer, a silver layer, a metal layer deposited on the silver layer, and an upper layer comprising metal oxide or semiconductor that is deposited on the metal layer.

Product Species 2 (claims 12 and 25): substrate having a thin-film multilayer that has alternating layers of reflective layers and coating layers, wherein the multilayer also includes layers that absorb visible light, and wherein the coating layers comprise one of

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the following: dielectric, a mixture of silicon and aluminum, silicon oxynitride, and zinc oxide.

Product Species 3 (Claims 13 and 26): substrate having a thin-film multilayer that has alternating layers of reflective layers and coating layers, wherein the multilayer contains between two dielectric layers a layer of silver or a layer of metal alloy containing silver.

Product Species 4 (Claims 14 and 27): substrate having a thin-film multilayer that includes a sequence of the following five layers: a first layer, a dielectric layer deposited on the first layer, a functional layer having reflective properties for infrared and/or solar radiation, a metal layer on a silver layer, an upper layer comprising silicon nitride deposited on the metal layer.

Product Species 5 (Claims 15 and 28): substrate having a thin-film multilayer that includes a functional layer based on a partially or fully nitrated metal and a layer of aluminum nitride, oxynitride, silicon nitride, or a mixture thereof that is surmounted on the functional layer, wherein the multilayer also includes a transparent dielectric layer between the substrate and the functional layer.

Product Species 6 (Claim 16): substrate having a thin-film multilayer that includes alternating dielectrics having high or low refractive indices.

Product Species 7 (Claims 17 and 29): substrate having an electrochemical device on one of its sides.

9. Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply

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must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

10. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the common technical feature that the product species share is that the substrates are made with the method of claim 1. However, as explained above, the method of claim 1 is obvious in view of U.S. Patent Application Publication No. 2003/0064198 by Thomsen, and therefore, the product species lack a common special technical feature.

11. A telephone call was made to Surinder Sachar on December 3, 2009 to request an oral election to the above restriction requirement, but did not result in an election being made.

12. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

13. The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

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14. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN COLEMAN whose telephone number is (571)270-7376. The examiner can normally be reached on Monday-Friday, 9-5.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571)272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a



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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RLC/

Ryan L. Coleman

Patent Examiner, Art Unit 1792

December 4, 2009

/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 1792